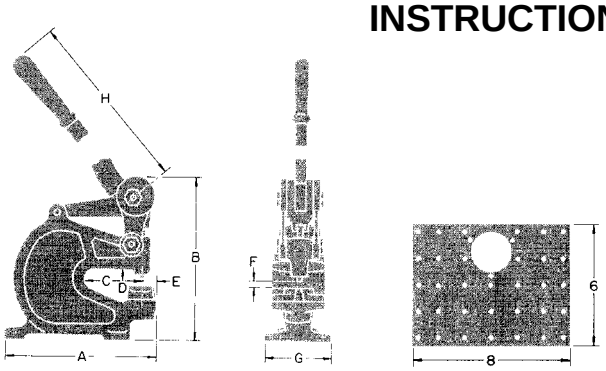
NO. 16 & NO. 17 BENCH PUNCH
INSTRUCTIONS AND PARTS LIST



DIMENSIONS:	NO. 16		NO. 17	
Reference	IN.	MM	IN.	MM
A	8 7/16	214.31	12 3/8	314.33
B	9 5/8	244.48	10 9/16	268.29
C	3 1/4	82.55	6 1/2	165.1
D	1 3/4	44.45	2 1/8	53.98
E	7/8	22.23	7/8	22.23
F	3/8	9.53	3/8	9.53
G	3 7/8	98.43	4 1/2	114.3
H	24 1/2	622.3	24 1/2	622.3

No. 16

No. 17

CARE: Oil at hinge points, the punch guide hole in the frame, and the punch point. No other care is necessary.

OPERATION: To change punches, remove the lever handle screw (11) and pull lever handle assembly back to release punch from eccentric arm slot. Lift punch from guide hole. Put new punch in guide hole and move eccentric arm forward until punch slot is engaged in eccentric arm, then replace lever handle screw.

TO CHANGE DIES: Loosen die shoe set screw (12). Remove one die shoe bolt (14) and pivot die shoe toward operator. Push upon die. Insert new die and die shoe bolt. Tighten die shoe set screw. Lower punch into die, check clearance and tighten both die shoe bolts.

FOR MAXIMUM OPERATOR SAFETY DO:

1. Read and understand this manual.
2. Use only No. 16 punches for the No. 16 and No. 17 punches for the No. 17 and No. 20 dies marked with a W or R-W designed for this tool.
3. Be sure you punch within the 7 ton capacity for No. 16 or 5 ton for No. 17. Type and thickness of material versus final hold size will give you this tonnage.
4. Wear safety glasses.

FOR MAXIMUM OPERATOR SAFETY DO NOT:

1. Use punches and dies that are chipped or dulled.
2. Punch over capacity of the tool.
3. Nibble. Punch a full hole not a half hole as punch may contact die.

ROPER WHITNEY

NO. 16 & NO. 17 BENCH PUNCH
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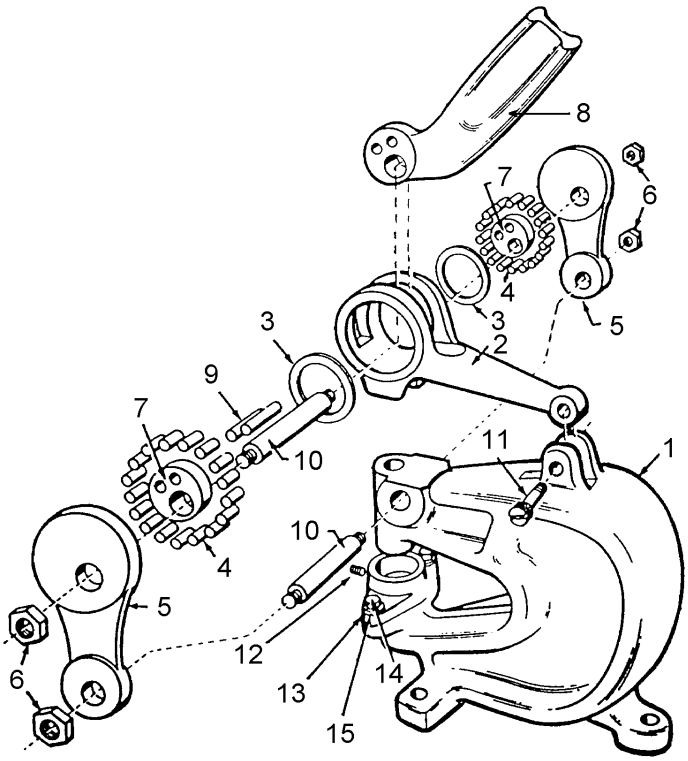

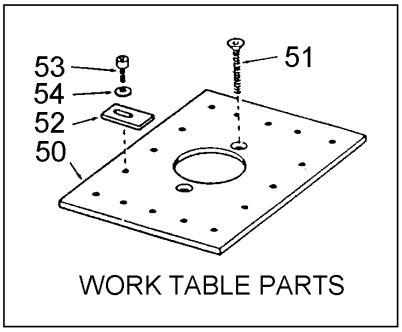

ITEM NO.	PART NO.	PART NAME	QTY.
1	731140001	Frame #16	1
1	731140008	Frame #17	1
2	731030003	Eccentric Arm	1
3	730260058	Roller Retainer	2
4	600255201	Roller Bearing	34
5	730240054	Side Link	2
6	730560055	Side Link Bolt Nut	4
7	730210057	Eccentric Cam	2
8	731460002	Lever Handle	1
9	600053332	Cam Pin	2
10	730160052	Side Link Bolt	2
11	730650053	Lever Handle Screw	1
12	621012082	Die Set Screw, 1/4-20 x 1/4	1
13	731320004	Die Shoe	1
14	601012132	Die Shoe Bolt, 5/16-18 x 7/8	2
15	678033104	Die Shoe Bolt Washer	2
50	731060006	Work Table Plate	1
51	605012137	Work Table Set Screw, 5/16-18 x 1 1/2	2
52	774420101	Work Table Gauge	3
53	611012086	Work Table Gauge Screw, 1/4-20 x 1/2	3
54	678033103	Work Table Gauge Washer	3
55	600366507	Work Table Gauge Wrench, 3/16 Hex (Not Shown)	1

Tons of Pressure Required to Punch Mild Steel													
Round Hole Diameter	GA. IN.	20 .036	18 .048	16 .062	14 .075	12 .105	11 .120	10 .135	3/16" .188	1/4" .250	5/16" .312	3/8" .375	1/2" .500
1/8"		.4	.5	.6	.7	1.0	1.2	1.3	-	-	-	-	-
3/16"		.5	.7	.9	1.1	1.5	1.8	2.0	2.8	-	-	-	-
1/4"		.7	.9	1.2	1.5	2.1	2.4	2.6	3.7	4.9	-	-	-
5/16"		.9	1.2	1.5	1.8	2.6	2.9	3.3	4.6	6.1	7.8	-	-
3/8"		1.1	1.4	1.8	2.2	3.1	3.5	4.0	5.5	7.4	9.2	11.1	-
7/16"		1.2	1.6	2.1	2.6	3.6	4.1	4.6	6.4	8.6	10.7	12.8	-
1/2"		1.4	1.9	2.3	2.9	4.1	4.7	5.3	7.4	9.8	12.3	14.8	19.7
9/16"		1.6	2.1	2.6	3.3	4.6	5.1	5.9	8.3	11.1	13.9	16.5	22.0